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General Comment

The following comments are respectfully submitted from the Amateur Radio Research and Development Corporation, AMRAD, McLean, Virginia. AMRAD is an amateur radio club whose members have previously experimented with low frequency transmission and reception techniques using an experimental FCC license WA2XTF issued in 1999.

AMRAD members fully support the FCCs proposed allocation of amateur allocation at 2200 Meter (135.7-137.8 kHz) and 630 Meter (472-479 kHz) Bands. AMRAD believes it is important for the FCC to allow amateur experimentation at these low frequencies to complement the work performed at higher frequencies in the amateur bands. Allowing operation in these new low frequency bands will increase technical knowledge in an important area of the communications spectrum, providing additional innovation and application of modern communication techniques to previously unavailable spectrum. Operation in these additional low frequency bands will improve technical knowledge on radio propagation, short antenna design techniques, digital transmission and reception technologies, and communication with high environmental noise.

AMRAD is confident that the proposed amateur frequency bands can be utilized in harmony with existing power line carrier (PLC) functions. As PLC is a wired system, designed to operate in a high noise environment of the power line transmission line over which it operates, amateur operation at levels proposed by the ARRL should not cause interference with modern PLC equipment. Operation in countries outside of the USA appear to have been without incident with PLC while military and other systems operate compatibly within the PLC bands. Further, because the PLC system is a wired system, using horizontal power conductors, amateur transmissions with vertical polarization, necessary for low frequency propagation should exhibit reduced interference by cross-polarization. To further minimize potential interference, AMRAD proposes that PLC systems avoid the amateur allocations at the two proposed allocations.

AMRAD is confident that amateur stations will be able to monitor the radiated power of transmissions in the proposed bands and that further restriction in proposed power limits is unnecessary. Further restriction of bandwidth of transmissions within the allocated frequency ranges is also is unnecessary as amateurs are capable of monitoring transmissions characteristics, and, typical low frequency transmit antennas generally have bandwidth restrictions.

In summary, AMRAD fully supports the FCC and ARRL in implementing a United States allocation of low frequency operation, available in countries outside the United States. The allocations will promote continued education of amateurs and experimentation of radio technology which will greatly benefit the technology base of the United States.

Respectfully Submitted;
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